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Applied Chemistry, Creative Solutions

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August 24, 2001

Kay Hower  
Lancaster Laboratory  
2425 New Holland Pike  
Lancaster, PA 17605

Overnight Mail

Dear Ms. Hower:

The United States EPA has asked us to have you make the attached changes to your laboratories Quality Assurance Manual and/or Standard Operating Procedures. The agency believes that the SOP issues can be resolved in a two-week time frame. Therefore, Sauget Area 2 Sites Group (SA2SG) is requesting that you make these changes requested by US EPA and return the modified Quality Assurance Manual and SOPs by September 7th, 2001. We also request that you list any of the U.S. EPA recommendations with which you do not agree, along with a brief explanation of why it is inappropriate.

The SA2SG is willing to pay your standard labor costs for this effort, if requested. We sincerely appreciate your prompt attention to this request. Please notify me by email if you have any questions, or will not be able to meet this deadline.

Sincerely;

Steven D. Smith  
Project Coordinator  
sdsmit@Solutia.com

cc: Mike McAteer - USEPA  
SA2SG Members

**LABORATORY QUALITY ASSURANCE MANUALS AND SOPs VOLUME 5A**  
**LANCASTER LABORATORIES**

**I      Lancaster Laboratories Quality Assurance Plan**

Section 9, page 28 of 29

Several project required Analytes are not in this table and do not meet the PQLs.  
See QAPP Tables 5A and 5B.

**II      Waters and Wastewaters for Volatile Target Compounds by GC/MS Analysis  
#2300-6371**

- A      Standards, item 3  
Specify the concentration of the Matrix Spike (MS).
- B      Quality Assurance  
The project Quality Control (QC) Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7A.
- C      Provide Retention Times (RTs) and Quantitation Ions with corresponding internal standards for the Volatiles determined by this method.
- D      Table I-A  
The PQLs for Benzene, cis-1,3-Dichloropropene, and Trichloroethene are greater than those specified in QAPP TABLE 5C.

**III      Soils and Solids for Volatile Target Compounds by GC/MS Analysis #2304-8795**

- A      Standards, item 3  
Specify the concentration of the Matrix Spike (MS).
- B      Calculations  
Include the per-cent dry weight.
- C      Quality Assurance  
The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7A.
- D      Provide RTs and Quantitation Ions with corresponding internal standards for the Volatiles determined by this method.

**IV      Preparation of Solids for Volatile Analysis Analysis #8389**

Procedure

Include provisions for determining per-cent dry weight.

**V Determination of Semivolatile Organic Compounds by Method 8270C Analysis  
#0949-7805**

- A The compounds, PQLs and MDLs should be included in this SOP.
- B Provide RTs and Quantitation Ions with corresponding internal standards for the Semivolatiles determined by this method.
- C Procedure  
Specify the preparation and concentration of the standards and calibration standards (SOP-EX-001).
- D Include the Water and Soil/Sediment sample preparation (extraction) procedures.
- E Quality Assurance  
The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7B.

**VI Analysis of Pesticides and Polychlorinated Biphenyls (PCBs) in Aqueous Samples  
Analysis #0177-6020**

- A Only Pesticides need to be analyzed by this procedure.
- B Provide RTs on both columns for the Pesticides determined by this method.
- C Scope  
The LOQ for Toxaphene (1 ug/L) is more than the PQL (0.5 ug/L) specified in QAPP TABLE 5G.
- D Extraction Procedure  
Provide organic extraction method 0817.
- E Quality Assurance  
The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7C. Provide SOP-PP-002, QC Data Acceptability and Corrective Action.

**VII Analysis of Pesticides and Polychlorinated Biphenyls (PCBs) in Solid Samples  
Analysis #1363-6005**

- A Only Pesticides need to be analyzed by this procedure.
- B Provide RTs on both columns for the Pesticides determined by this method.
- C Extraction  
Provide organic extraction method 0819.
- D Quality Assurance  
The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7C. Provide SOP-PP-002, QC Data Acceptability and Corrective Action.

**VIII Analysis of Polychlorinated Biphenyls (PCBs) in Aqueous Samples Analysis #0173, 6030**

- A The project indicates that **PCBs** will be analyzed by the EPA Method 680 (QAPP TABLE 2 and QAPP Table 7D), and **Total PCBs** are the desired Constituent (QAPP TABLES 5G and 5H). This SOP may not be appropriate for this project. An SOP based on the EPA Method 680 may have to be provided.
- B Extraction  
Provide organic extraction analysis #0817.
- C Quality Assurance  
The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7D. Provide SOP-PP-002, QC Data Acceptability and Corrective Action.
- D Provide example chromatograms of PCBs, or Congeners.

**IX Analysis of Chlorinated Herbicides in Water Analysis #0952-5593**

- A Provide RTs on both columns for the Herbicides determined by this method.
- B Extraction  
Provide analysis #0816.
- C Quality Assurance  
The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7C. Provide SOP-PP-002, QC Data Acceptability and Corrective Action.

**X Analysis of Chlorinated Herbicides in Soil Analysis #1863-5592**

- A Scope  
The LOQs for 2,4-D and 2,4-DB are greater than those specified in QAPP TABLE 7H.
- B Provide RTs on both columns for the Herbicides determined by this method.
- C Safety Precautions  
Provide analysis #4181, Extraction of Chlorinated Herbicides in a Soil Matrix..
- D Quality Assurance  
The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7C. Provide SOP-PP-002, QC Data Acceptability and Corrective Action.

**XI Sample Preparation of Wastewater and Extracts for Analysis of Total Metals....Analysis #5705, 5706**

Provide a list of Metals that will be determined by this method.

**XII Sample Preparation of Sediments, Sludges, and Soils for Analysis of Metals....Analysis #5709, 5708**

Provide a list of Metals that will be determined by this method.

**XIII SOP-IO-007.01**

- A On Page 8 of 12, typo, F.3.5 may be missing.
- B On Page 11 of 12, typo, verify H.5.10 and H.5.11. See SOP-IO-007H.02, Page 14 of 15.

**XIV SOP-IO-014.04**

- A Routine Methods  
Provide the LOQs, MDLs, and analytical wavelengths of the metals determined by this method. See QAPP TABLES 5A and 5B for the project required TAL Metals, MDLs, and PQLs.
- B The project QC Requirements and Corrective Actions should be incorporated into this SOP. See QAPP Table 7E.

**XV PROVIDE SOPs**

**Lancaster Laboratories** must provide SOPs for the analysis of TCLP by EPA Method 1311, ORP, DO, Ferrous Iron, Nitrate, Sulfate, Alkalinity, Methane, Carbon Dioxide, pH in soil, and TOC in soil, if **Lancaster Laboratories** are designated to do these analyses.